

4

OFFICE PRODUCTIVITY TOOLS Part I

4.1 INTRODUCTION

Office Productivity tools are software programs designed to make computer users more productive and efficient at their workplace. Office productivity tools range from word processing to spreadsheet, presentation and database etc. In this lesson we shall consider two productivity tools for doing word processing and spreadsheet related work.

4.2 OBJECTIVES

After going through this lesson you would be able to:

- explain basic menu details of Word processing
 - create, save, and modify Word files
 - protect a Word document quickly and efficiently
 - enter and edit data in a worksheet
 - format data and worksheets
 - perform various types of calculations in worksheet using formulas and functions
-

4.3 STARTING WORD PROGRAM

You can start the WORD program as follows

1. Click on the **Start** button.
2. In the menu that appears select **All Programs→ Microsoft Office→Microsoft Office Word 2007**



Fig.4.1

In a few seconds you will see Word screen on the monitor

4.4 WORD SCREEN LAYOUT

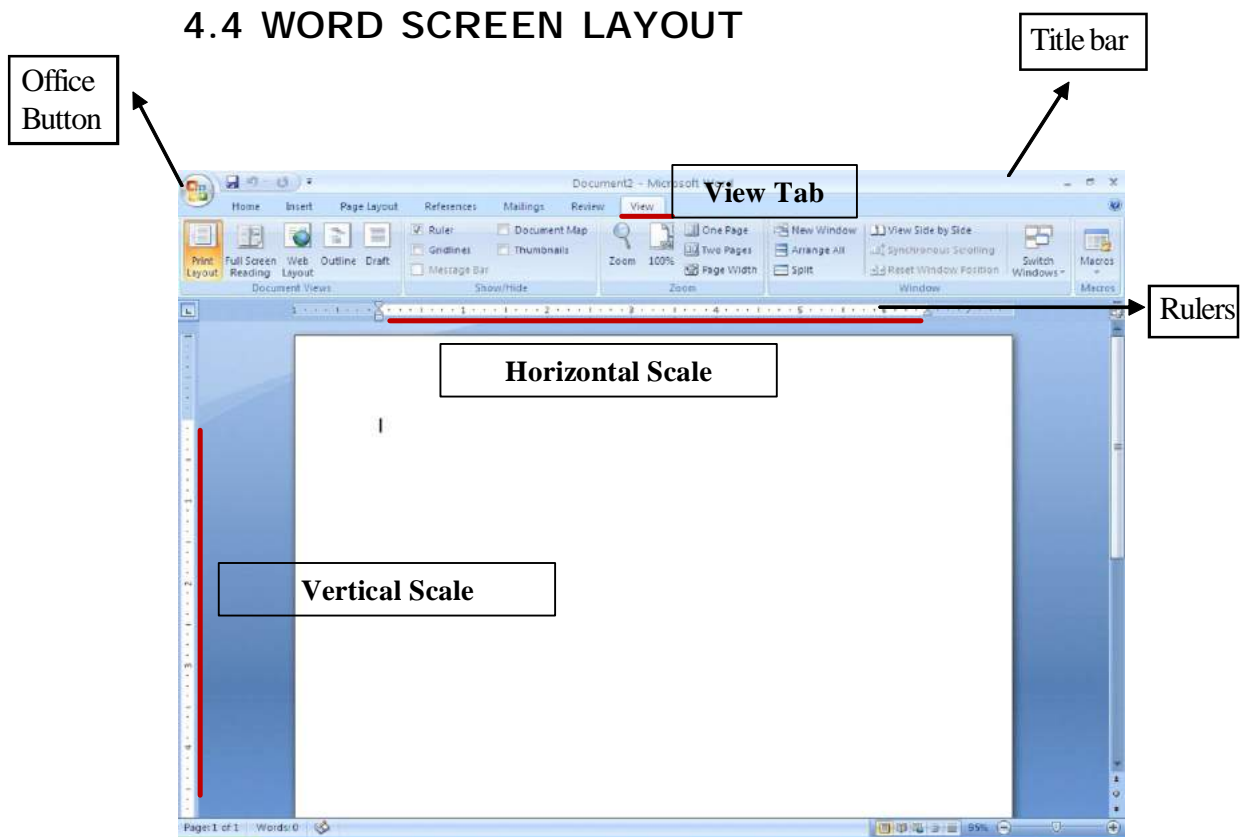


Fig.4.2 Word Screen

Office button

It is one of the important part of the screen used in file management containing menus like New, Open, Print etc.

Title bar

Title bar is the topmost part of the screen which contains quick access tool bar on the left, title of the document in the centre and the sizing buttons on the extreme right of it.

Ribbon

The Ribbon is designed to help you quickly find the commands that you need to complete a task.

Rulers

The rulers display horizontal and vertical scales that reflect the width and height of your typing area. The horizontal scale is

invaluable when you want to quickly set tabs, margins, and indents. Select the View tab on the main word screen to be able to select/deselect the Ruler/Gridlines and other options.

Typing Area

The open area below the ribbon is writing or typing area. There are certain objects that are a permanent part of the typing area. These are: (a) Insertion Point, (b) Mouse Pointer

- (a) **Insertion Point:** The black vertical blinking line is the cursor and place where it is blinking is insertion point that is initially at the top left side of the typing area i.e., at the beginning of the document. It indicates the place where your typing is inserted into the document. As you type, the blinking line continuously moves along towards right.
- (b) **Mouse Pointer:** When you move the mouse around in the typing area, the mouse pointer is in the shape of a thin I-beam. As you move the mouse near the menu bar and toolbars, the mouse pointer becomes a pointing arrow. .

Scrollbars

The typing area is bordered on the right side by the vertical scroll bar with a scroll button and arrows. The single down arrow scrolls through the document line by line. The double down arrow allows you to move to the top of the next page. The double up arrow allows you to move to the top of the previous page. The double down arrow allows you to move to the top of the next page. You can also drag the vertical scroll button up and down the scroll bar to move up and down through the document.

Status bar:

It is situated at the bottom of the screen and contains status of the document.

4.5 MANAGING DOCUMENTS

This section of the lesson explains how to open a new/existing document, save a document, print a document, finding a document, and closing an opened document. There are several

ways to create new documents, open existing documents, and save documents in Word. Click on the Office Button to use one of the following options from the menu pull down bar.

To Create a New Document

- Click **New** button on pull down menu bar.

Or

- Press **CTRL+N** keys on the keyboard.

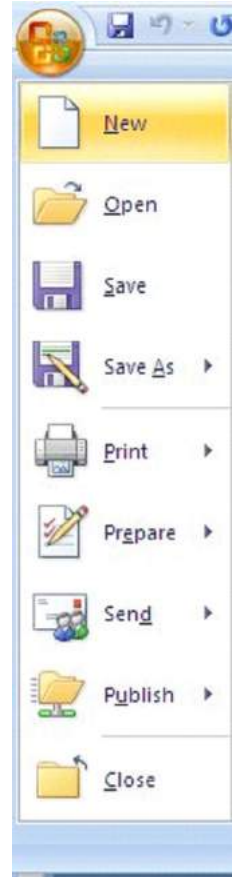


Fig.4.3

To enter text, just start typing in the text area. As you type, the text will appear where the blinking cursor is located and will move from left to right. Unlike with a typewriter, you need not press ENTER key at the end of each line, the text automatically shift to next line.

To Open an Existing Document

To open an existing document, follow one of the following methods:

- Click the **Open** button on the pull down menu.

Or

- Press **CTRL+O** keys on the keyboard.
-

Each of the above method will show the **Open** dialog box.
Choose the file and click the **Open** button.

To Save a New/Existing Document

To save a new/existing document that is opened, follow one of the following methods:

- Click the **Save** button on the pull down menu.

Or

- Press **CTRL+S** keys on the keyboard.

If the document is already named and saved earlier, it will simply save the document. On the other hand, if the file is a new document then it will prompt you by opening **Save As** dialog box. Select the folder where you want to place your document in **Save In:** box, type the name of the document in **File Name:** box, and then click **OK**. You can also save a new document by choosing **CTRL→S** on the keyboard and then selecting the above actions in **Save As** dialog box.

To Close a Document

Close the current document by selecting **Office Button→Close** command on the menu bar or click the **Close** icon if it is visible on the Standard toolbar.

4.6 EDITING A DOCUMENT

Editing a document includes basic three tasks. Inserting text, Deleting text and Replacing text

Inserting Text

To insert the text in an existing document, follow the steps given below:

1. Move the cursor by using the arrow buttons on the keyboard or positioning the mouse and clicking the left button where you want to insert the text.
2. Type the text you want to insert.

Deleting Text

Use the **BACKSPACE** and **DELETE** keys on the keyboard to delete text. **Backspace** will delete the text to the left of the cursor and **Delete** will erase the text to the right

Replacing Text

Word can combine the steps of deleting unwanted text, positioning the insertion point, and inserting replacement text. To replace text, follow the steps given below:

1. Select the text to be removed as explained above.
2. Start typing the new text. Observe that the new text is replacing the selecting text.

4.7 FORMATTING DOCUMENT

Formatting a document mainly involves formatting of Font and Paragraph.

Font Formatting

Using the **Formatting** toolbar is the easiest way to change many attributes of text. If the toolbar as shown below is not displayed on the screen, select **Home Tab**. Under Home Tab you can select desired Formatting commands under **Font**, **Paragraph** subtask as per the diagram given below.

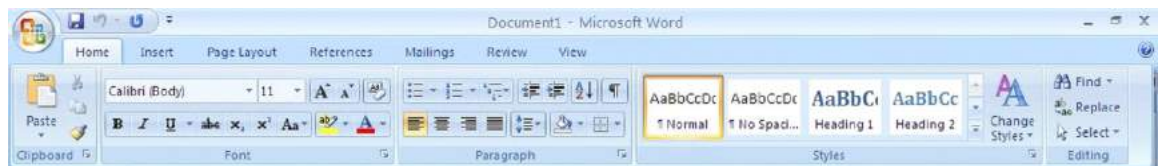


Fig.4.4

- **Font Face** - Font is the basic typeface in which your words are displayed. Font comes in families such as Times New Roman or Ariel. Each font family has a specific way of formatting individual letters.
 - **Font Size** - It determines how large each letter will appear. The font size is measured in points (1/72 of an inch). Click on the white part of the font size box in the **Font Formatting** subtask menu to enter a value for the font size or click the arrowhead to the right of the box in the Formatting toolbar to view a list of font sizes available.
 - **Font Style** - Font style determines the emphasis or weight that the letters have when they are displayed. Each font can be displayed as **bold**, *italicize*, and underline.
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- **Alignment** - Text can be aligned to the left, center, or right side of the page or it can be justified across the page.
- **Numbered and Bulleted Lists** - Lists are used to highlight the main points of the document.
- **Increase/Decrease Indent** - Change the indentation of a paragraph in relation to the side of the page.
- **Outside Border** - Add a border around a text selection.
- **Highlight Color** - Use this option to change the color behind a text selection. The color shown on the button is the last color used. To select a different color, click the arrowhead next to the image on the button.
- **Text Color** - This option changes the color of the text. The color shown on the button is the last color chosen. Click the arrowhead next to the button image to select another colour.

Line Spacing: Line Spacing determines the height of each line of text in the paragraph. The default (single line spacing) depends on the size of the font characters. The preview area demonstrates the relative effect of single, one-and-a-half and double line spacing.

4.8 BULLETED AND NUMBERED LISTS

Bulleted lists and Numbered lists are often used to bring main points to a reader's attention.

Creating a Bulleted and Numbered Lists

To create a bulleted or numbered list, use the list features provided by Word. Click the **Bulleted List** button or **Numbered List** button on the formatting toolbar. Then type the first entry and press **ENTER**. This will create a new bullet or number on the next line. If you want to start a new line without adding another bullet or number, hold down the **SHIFT** key while pressing **ENTER**. You can also type the text first, highlight the section, and press the **Bulleted List** or **Numbered List** buttons to add the bullets or numbers.

4.9 WORKING WITH TABLES

Tables

There are two ways to add a table to the document using the Insert feature:

1. Click on the **Insert Table** tab on the standard tool bar and select table icon from the sub-task menu
2. Drag the mouse along the grid, highlighting the number of rows and columns required for the table. And as you select the number of rows and columns, accordingly the table will get created on the document.
3. Alternatively select **Insert** Tab→**Table** from the sub-task menu bar. Then select Insert Table options to display the input screen for number of rows and columns the table will have.

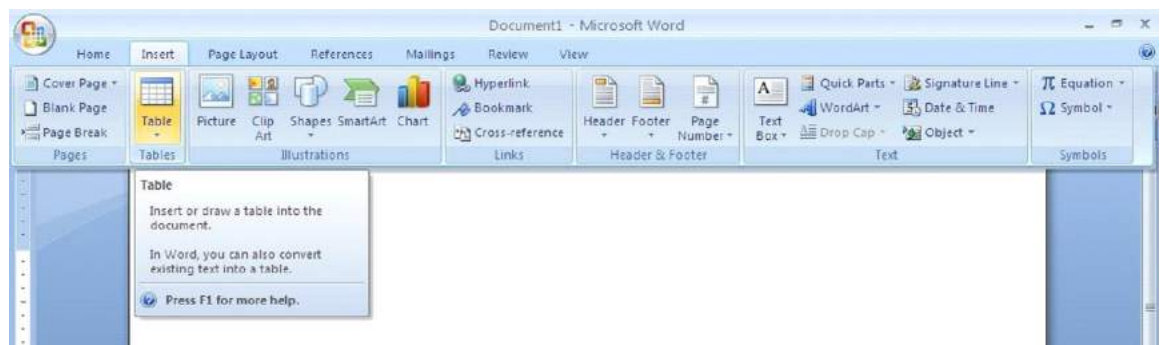


Fig. 4.5



Fig.4.6

4.10 ADDING GRAPHICS

Word accepts most popular graphic file formats in use today, and it comes with large collection of ready-to-use clip art. You can also import your own graphic files from any source such as scanners and digital cameras. You can also create your own artwork by using drawing tools in Word. The tools to insert graphics in to the document are available in Illustrations groups under **Insert** tab from the main tab bar.

4.11 COPYING TEXT AND MOVING TEXT

Copying Text

Copying means to make a copy of the selected text and insert it at another location, leaving the original text unchanged. To copy text, follow the steps given below:

1. Select the text that will be copied.
2. Select **Home→Clipboard** sub task menu command on the menu bar, or click the **Cut** button on the standard tool bar, or press **CTRL+X** keys. This will move the text to a clipboard.
3. Choose **Home→Clipboard** sub task menu command on the menu bar, click the **Copy** button on the standard toolbar, or press **CTRL+C** keys to copy the text to the clipboard.

Moving Text

Moving text means to remove (cut) the selected text from one location and insert (paste) it at another location. To move text follow the steps given below:

1. Select the text that will be moved.
2. Select **Home→Clipboard** sub task menu command on the menu bar, or click the **Cut** button on the standard tool bar, or press **CTRL+X** keys. This will move the text to a clipboard.
3. To paste cut text, move the cursor to the location you want to move the text to and select **Home→Clipboard** sub task menu command on the menu bar, click the **Paste** button on the standard toolbar, or press **CTRL+V** keys.

To move a small amount of text a short distance, the drag-and-drop method may be quicker. Highlight the text you want to move, click the selection with the mouse, drag the selection to the new location, and release the mouse button.

SPELLING AND GRAMMAR

The spelling and grammar checkers check for misspelled words or grammar errors. Word will automatically check for spelling and grammar errors as you type unless you turn this feature off. To use the spelling and grammar checker, follow these steps:

1. Select button from the main tab bar or press **F7** button on the key board.
2. The **Spelling and Grammar** dialog box will notify you of the first mistake in the document and misspelled words will be highlighted in red.
3. If the word is spelled correctly, click the **Ignore** button or click the **Ignore All** button if the word appears more than once in the document.

4.12 PAGE LAYOUT

In this section, you will learn designing pages suiting to your needs. For instance, the page setup options which included paper size and page orientation etc. are normally set either by you or by default at the beginning of the opening a new document. These options are available under **Page Layout** tab and can easily be changed at any time according to your needs

Page Margins

There are two methods by which you can change the page margins of your document: (a) using ruler and (b) using Page Setup dialog box.

(a) Using Ruler

1. Move the mouse over the area where the white ruler changes to grey
2. When the cursor becomes a double-ended arrow, click with the mouse and drag the margin indicator to the desired location.
3. Release the mouse when the margin is set.

(b) Using Page Set-up Dialog Box

The margins can also be changed using the Page Setup dialog box:

Select **Page Layout** Tab and click on the command on the menu bar and choose the **Margins** button under **Page Setup** sub task group to display the margin dialog box .

4.13 HEADERS AND FOOTERS

A header is text that is added to the top margin of every page such

as a document title or page number and footer is text added to the bottom margin. Follow these steps to add or edit headers and footers in the document.

1. Select **Insert→Header and Footer** subtask menu on the main tab bar. Click on the Header or Footer option as per the requirement

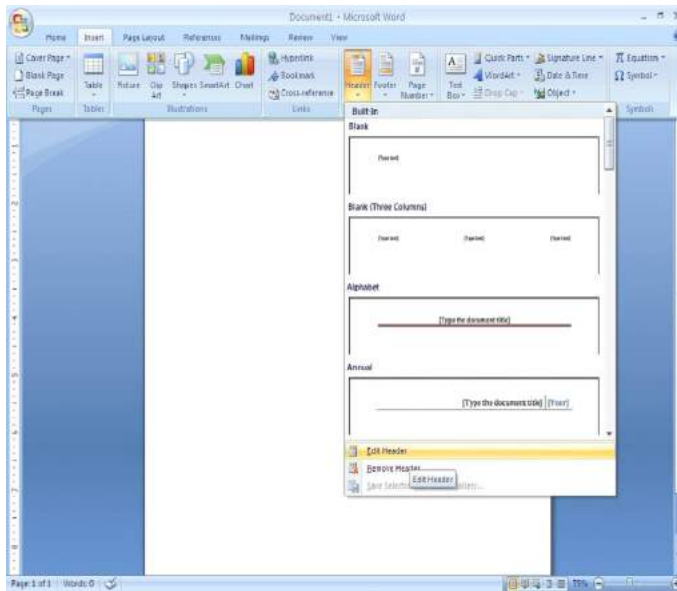


Fig 4.7

2. On selecting **Header** option, header toolbar will appear and the top of the page will be highlighted.
3. Type the heading in the **Header** box. You may use many of the standard text formatting options such as font face, size, bold, italics, etc.

Similarly you can select the designated command for Footer and customized it as per requirement.

4.14 PAGE NUMBERS

Use these steps to add page numbers to a document as shown in figure.

1. Select **Insert→ Page Numbers** from the main tab bar and the following dialog box will appear.
-

2. Select the Position of the page numbers by choosing "Top of page" or "Bottom of page" from the **Position** drop-down menu.
3. Click **OK** when finished.

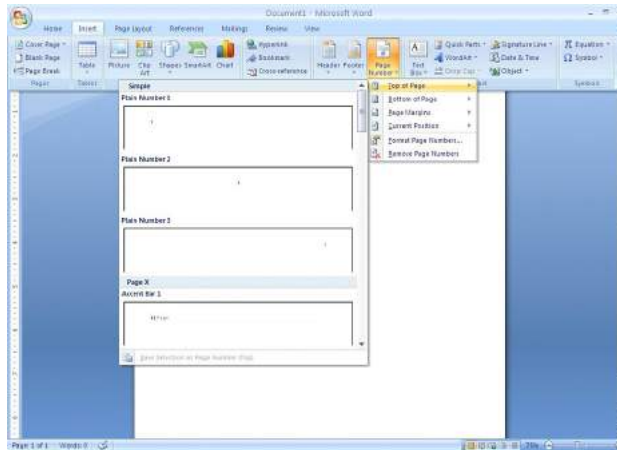


Fig. 4.8

4.15 PRINTING DOCUMENTS

While printing a document you have the following options in **Print** dialog box:

1. Name of the printer (if you have more than one printers).
2. Choose paper size, orientations, resolution etc. by pressing Properties button.
3. Print the entire document

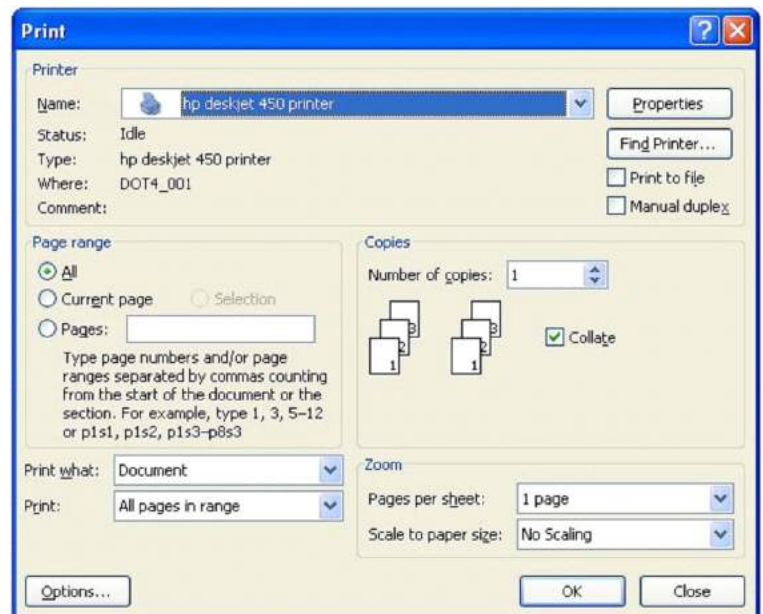


Fig. 4.9

or only current page or specific pages or even the selected part of the document.

4. Print a draft copy, which omits graphics to allow faster printing.
5. Number of copies to be printed, etc.

To print a document or selected pages follow the steps given below:

1. Open the document to be printed.
2. Choose **Office Button→Print** command on the menu bar. The **Print** dialog box will open. Select the Options like print range, Number of copies, Printer name etc. See that printer is switched on and the paper is available in the printer tray.
3. Click **OK**.

4.16 EXIT WORD PROGRAM

When finished your work in Word and closing all the files, you can quit the Word program by selecting **Office Button→Exit** command on the menu bar.

4.17 MAIL MERGE

Mail merge is one of the importing features of Word which is used to produce letters, mailing labels and envelopes and send it to different people or organization. Mail Merge requires three types of documents:

- (a) **Main Document:** In a Mail Merge operation, the personalized document (such as, a standard letter, or mailing label) is known as the main document. It is the document containing the text and graphics that stay the same for each version of the merged document.
 - (b) **Data Source:** Data source is a file that contains the names and addresses or any other information that vary with each version of a mail-merge document
 - (c) **Merge Document:** When you merge the main document with data source, a third document called merge document
-

will be produced. The merge document can be merged to the screen to view letters along with addresses; or directly to the printer to print the letters along with addresses.

To do Mail Merge in Word click on the '**Mailings**' tab on the main tab bar to activate the mailings features and tools, which comprises subtask such as "**Create**", "**Start Mail Merge**", "**Write & Insert Fields**", "**Preview Results**" and "**Finish & Merge**"

Mail Merge Wizard

The Mail Merge wizard guides you through the process of doing a mail merge. This involves creating and editing main document; creating a new data file, opening an existing data file; and merging the data fields with main document. To use Mail Merge Wizard, select **Mailings**→**Start Mail Merge** subtask from the main tab bar. Then select **Step by Step Mail Merge Wizard** option on the subtask bar.

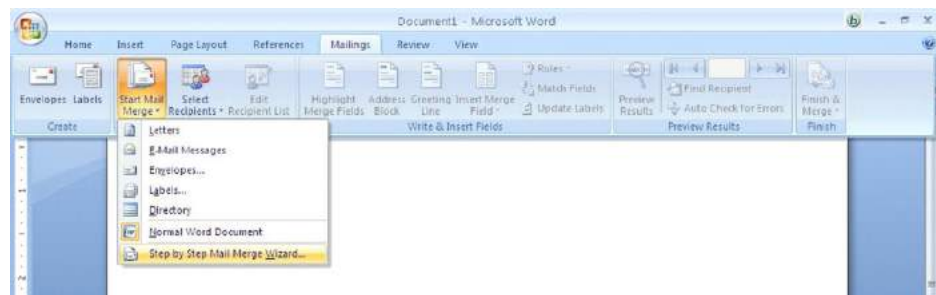


Fig 4.10

The **Mail Merge Wizard** menu will appear on the screen. This will help you to create mail merge documents in customised step manner.

Select Document Type

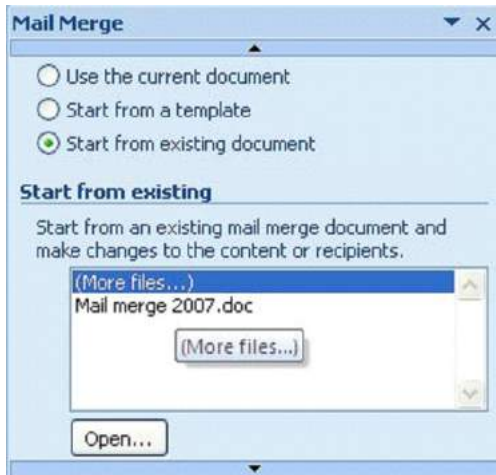
Selecting a Document Type is the first step towards creating a mail merge document. Using this option you can choose the type of main document such as Letters, E-Mail Messages, Envelopes, Labels, Directory

When you select Letters type, you can use this letter to send to a group of people with a personalised letter that is received by different people in that group with different address. Select **Letters** from the options given in the Select Document type box and click on the "Next: Starting document" located on the lower end of the Wizard dialog box to move to the next step.

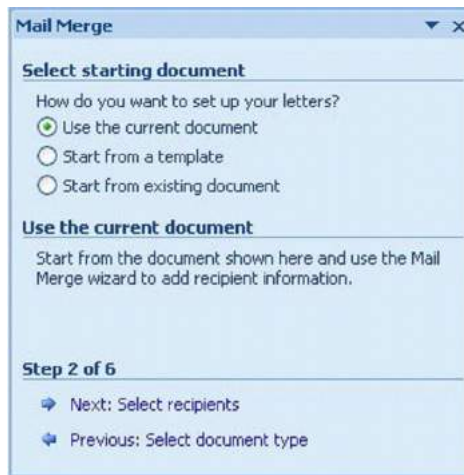
Select Starting Document

1. The 2nd step in the process is to select starting document under Letters option. There are three options available.

Use the current document: This is to use the current document shown and use the mail merge features to add recipients address or information.



(a)



(b)

Fig. 4.11

Start from a Template: Similarly if you don't have a drafted letter for use, you can choose for ready to use mail merge template already available with Word 2007 .

Start from existing document: If you already have a document available with you, you can select the existing mail merge document and make necessary changes to the content of the letter and/or recipients. Now you type the body of the letter as follows fig.4.12

15 January 2011
To

Dear,
We are happy to inform you that you have been admitted for the course Certificate in Data Entry Operations offered by NIOS. Your enrollment number is ____ Quote this number for all your correspondence with the School or writing assignments or writing term examinations.

With best wishes.

Director (Vocational)
NIOS
NOIDA

Fig. 4.12

Save your document.

Creating a Data Source

The 3rd step in Mail Merge Wizard is to select a list of recipients or address to whom the drafted letter will be addressed and dispatched.

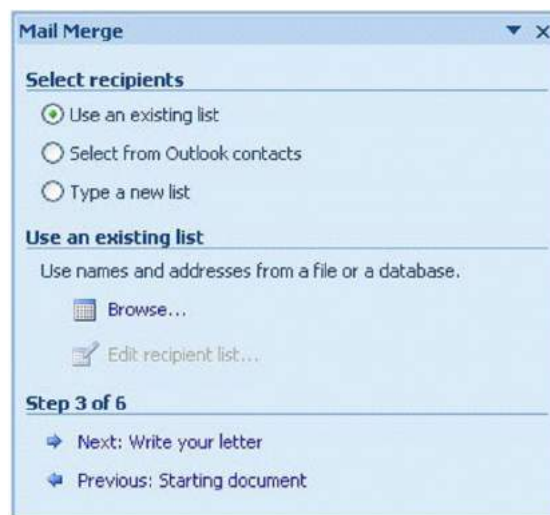


Fig. 4.13

If you do not have existing database information, you must create your own data source of the fields of information that will be inserted into the letter or any other main document. For example,

a Mail Merge letter which you have created earlier might require that you have the following fields in address list of students as data source: Name, Address1, Address2, City, State, and PIN Code.

Creating a Data Source Using Mail Merge Helper

You can use the Mail Merge Wizard to create a Microsoft Word, Excel or Access database data source.

Follow these steps to create a data source using Mail Merge Wizard: Open a new blank document if you have not yet created the main document or open your existing main document.

1. Select **"Type a new list"** from the **"Select Recipients"** dialog box in step 3 of the Mail Merge Wizard (Fig 4.13) and then select **"Create"** option
2. A dialog box appears to create a list with new set of data such as Title, First Name, Last Name, Company Name and Address Line 1 and so on.
3. You can start entering data to the respective field as per your requirement directly into the displayed **New Address List** dialog box.
4. If you want to **Customize Columns** in the new address list to remove or add any other field as per your requirement, click on the customised button located on the lower right side of the New Address List dialog box.
5. This will display a list of available data field to which you can add a customised data field, delete or rename an exiting data field in the list. Once done click on the **"OK"** button.
6. When you finish specifying the required data fields to the new address list, click **OK**. The **Save As** dialog box appears.
7. Locate the folder that you want to save the data source in, type a file name, and then click **Save As** in the Save As dialog box. The file will be saved with an extension name .mdb (Microsoft Database).

Merging Documents

Once if you have created your main document and data source document, the next two steps in mail merge are to insert merge

fields in the main document and then merge data in the main document.

To merge the fields in the main document you may have to do some editing in the main document. Follow these steps as defined:

1. Click on the location of your letter where you want the addresses to be displayed and then
2. Select **Address block** option on the dialog box displayed in step 4 of the Mail Merge Wizard. The **Mail Merge Wizard** displays the **Insert Address Block** dialog box.
3. Using **Insert Address Block** you can select the individual address field to be inserted into the main letter.
4. After you complete the main document and insert all of the merge fields, click on the **Office Button** and select **Save As** option. Now select "Word Document" to save the file as a Word 2007 document or Select "Word 97-2003 Document" to save it as Word 97 or 2003 compatible document. Name the document, and then click **Save**. Now your main document will work as merge document.

Merging the Data into the Main Document

Merging the data into the main document is the last step of the **Mail Merge Wizard**. Click on the << or >> button to display the preview of the main letter with address data before you close the merge document and take the printout of the letter. Once finished click on the "Next: Complete the Merge" option on the dialog box to complete the merging process.

4.18 FEATURES OF SPREADSHEET

The new results-oriented user interface makes it easy for you to work in Microsoft Office Excel. Commands and features that were often buried in complex menus and toolbars are now easier to find on task-oriented tabs that contain logical groups of commands and features. Many dialog boxes are replaced with drop-down galleries that display the available options, and descriptive tooltips or sample previews are provided to help you to choose the right option.

Starting Spreadsheet

1. Click on the **Start** button
2. In the menu click **All Programs -> Microsoft Office-> Microsoft Office Excel, 2007.**



Fig 4.14

It will start MS Excel 2007. The opening Excel screen is shown in Figure 4.15 and the description of all the screen features are shown in table.

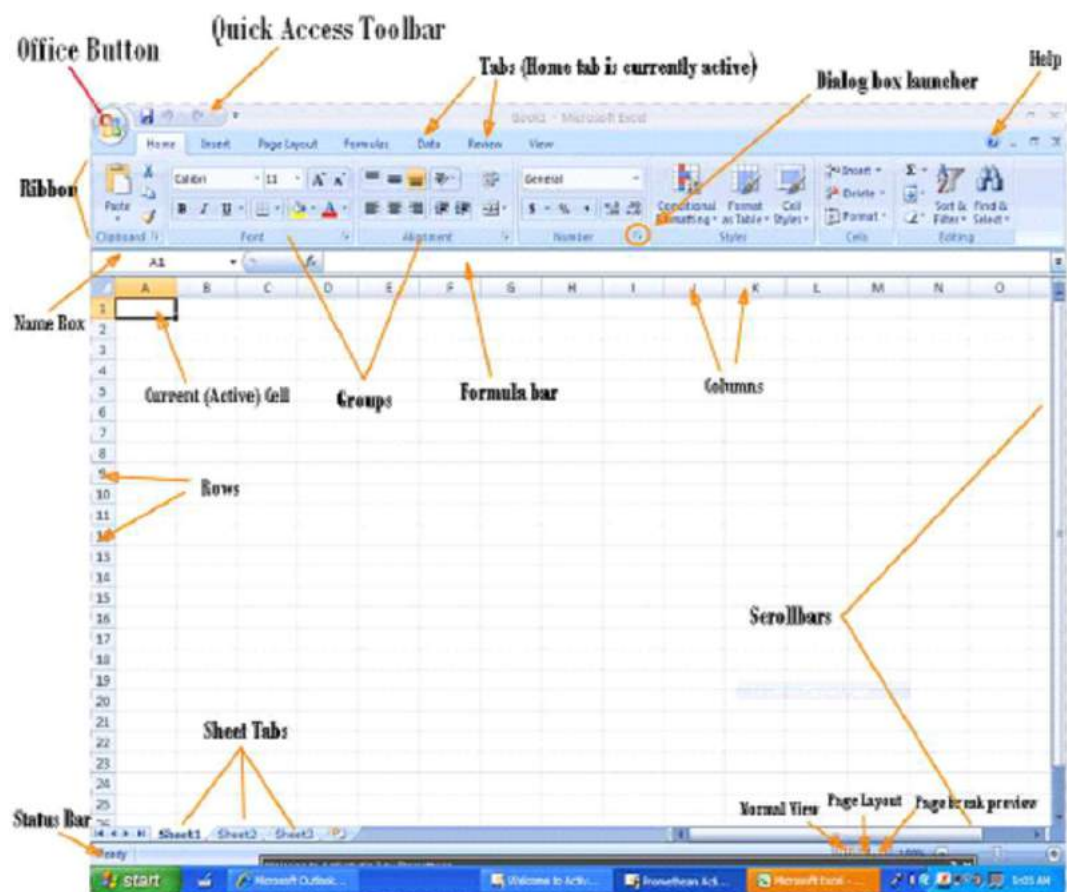


Fig.4.15 Spreadsheet Screen

Table 4.1: Excel Screen Features

Office Button	Displays as a Microsoft Office logo and,when clicked, displays a list of document management actions, such as save or print, and a list of recently opened workbooks.
Quick Access toolbar	Contains buttons for commonly used commands which can be executed with a single mouse click.
Tabs	Commands and features in the ribbon are organized into related groups which are accessed by clicking a tab name.
Title bar	Displays workbook name followed by Microsoft Excel.
Ribbon	Area from which commands and features for performing actions on a cell or worksheet are accessed. Begin by selecting a tab and then choosing the command or feature.

Name box	Displays the active cell address or name assigned to active cell.
Formula bar	Displays the contents stored in the active cell.
Active cell	Location in the worksheet that will display typed data or that will be affected by a command.
Worksheet area	Contains calls used to create the worksheet.
Vertical and horizontal scrollbars	Used to view various parts of the worksheet beyond the current screen.
Sheet tabs	Identifies the worksheets in the workbook. Use these tabs to change the active worksheet.
Status bar	Displays current mode, action messages, View buttons, and Zoom slider.

4.19 WORKSHEET

Information is created in Excel in a worksheet and is saved in a file called a workbook. Each Excel file is a workbook that can hold many worksheets. The worksheet is a grid of columns (designated by letters) and rows (designated by numbers). The letters and numbers of the columns and rows (called labels) are displayed in grey buttons across the top and left side of the worksheet. The intersection of a column and a row is called a cell. Data is entered into a cell. Columns are lettered from A to Z, AA to AZ, BA to BZ and so on. Similarly Rows are numbered 1, 2, 3, and so on. A column letter and a row number together identify a cell which is called cell address.

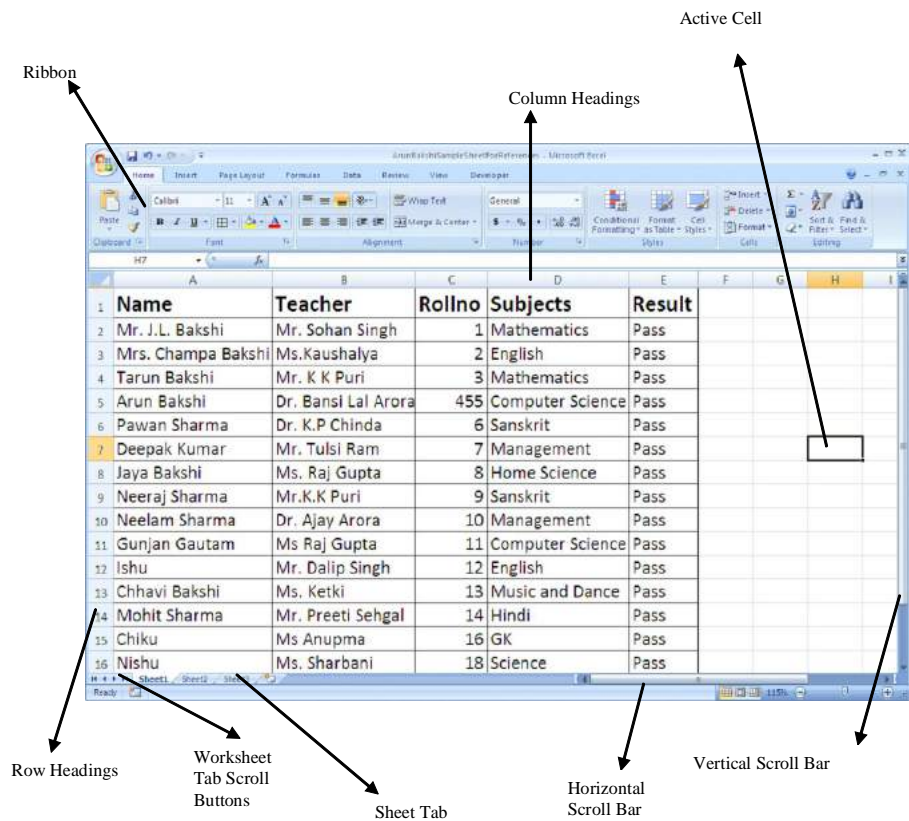


Fig.4.16

Creating New Workbook

A workbook is a collection of many worksheets. You can create a blank workbook or create a new workbook based on an existing workbook. By default, a workbook opens with three worksheets and it can contain a maximum of 255 worksheets.

For creating a new workbook:

1. Click on the **MS Office** button.
2. Click on **New**.
3. In the new dialog box, click **Blank workbook**.
4. Click on **create** button.

• Opening Workbook

To work on any worksheet in a workbook, first of all you have to open a workbook.

1. Click on the **MS Office** button.
2. Click on **open**. (or press **ctrl + O** Keys together)
3. In the open dialog box, choose drive, folder name that contains the workbook.
4. Click on **Open**.

• Saving a workbook

1. Click on **MS Office** button.
2. Click on **Save As**.
3. In **Save As** dialog box, specify the location where you want to save the file in the **Save in** box.
4. In the **File name** box, give the name of the file.
5. In the **save as type** box, give the type of the file.
6. Click save button.

• Closing a Workbook

1. Click on **MS Office** button.
 2. Choose **Close**
 3. You can select **Exit Excel** command to exit from MS Excel.
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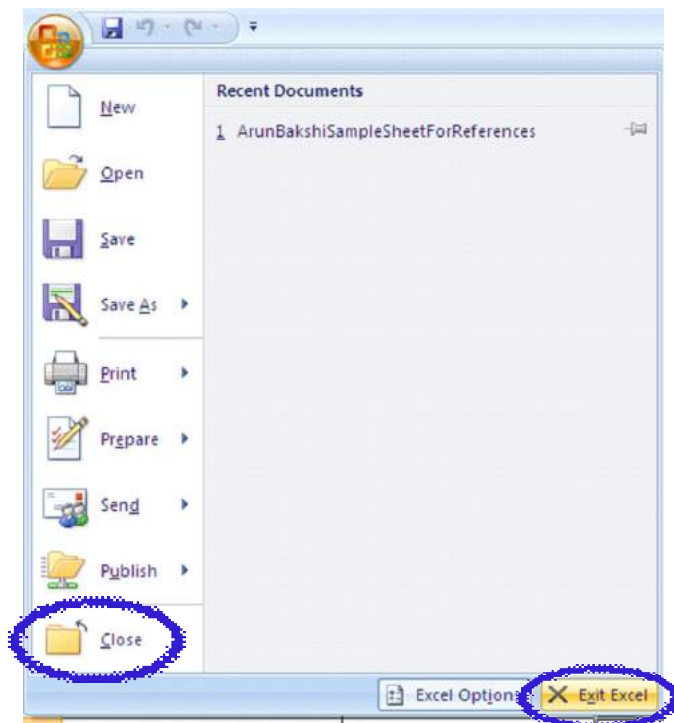


Fig. 4.17

Selecting, Adding and Renaming Worksheets

Insert a new worksheet

To quickly **insert a new worksheet at the end** of existing worksheets Click the Insert Worksheet tab as shown (encircled) in figure.

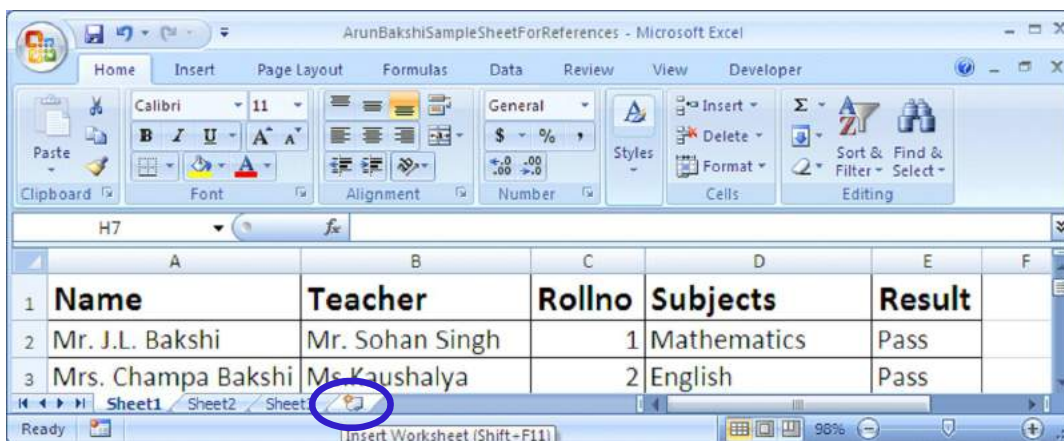


Fig.4.18

To insert a new worksheet before an existing worksheet,

Select and right click the worksheet before which you want to insert a new worksheet. Select Insert Option from Pop Up menu. In the Insert dialog box click on the worksheet and then click on OK. Name the worksheet as **Sheet 2**.

To rename a worksheet

To rename a worksheet follow the steps as:

1. Right click on the worksheet tab which you want to rename
2. Select rename from the Pop Up menu, the sheet name gets highlighted.
3. Type new name for the Worksheet (Chemistry in our example)
4. Previous name sheet 2 has been renamed as 'chemistry' as shown in figure 4.19

4.20 SELECTING CELLS AND RANGES

To enter data into your worksheet you must first have a cell or range selected. When you open an Excel worksheet, cell A1 is already active by default. An active cell will appear to have a darker border around it than other cells on the worksheet. The simplest way to select a cell is with your mouse pointer. Move your mouse to the desired cell and click on it with right button. Whatever you type goes into the cell. To select a range of cells, click on one cell, hold down the left mouse button and drag the mouse pointer to the last cell of the range you want to select. You can also use keyboard shortcuts given at the end of this lesson for selecting cells.

Another way to select particular range of cells is

Go to Name Box→Select range by typing (for example A1:C5)→Press Enter

All the cells between range A1 to C5 will be selected

4.21 ENTERING AND EDITING DATA

Entering data in a cell of the Excel Worksheet involves following steps:

1. Click on the desired cell where you want to enter data.
2. Type your data in the active cell.
3. Press **Enter**.

Text in a cell can include any combination of letters, numbers and keyboard symbols. A cell can contain upto 32000 characters.

Editing your Excel worksheet data is very easy. You can edit your data by any of the following ways:

1. Select the cell containing data to be edited. Press F2. Use Backspace key and erase the wrong entry. Retype the correct entry.
2. Select the cell and simply retype the correct entry.
3. If you want only to clear the contents of the cell, select the cell and press Delete key.
4. To bring back the previous entry, either click on **Undo** button on standard Toolbar or select **Edit→Undo** command or use keyboard shortcuts **CTRL+Z**.

4.22 FIND AND REPLACE DATA IN A WORKSHEET

You may want to locate a number or text that is already typed in the worksheet. This is done through **Home Tab→Find**. You can also locate your data and replace with new data with **Home Tab→Find→Replace**

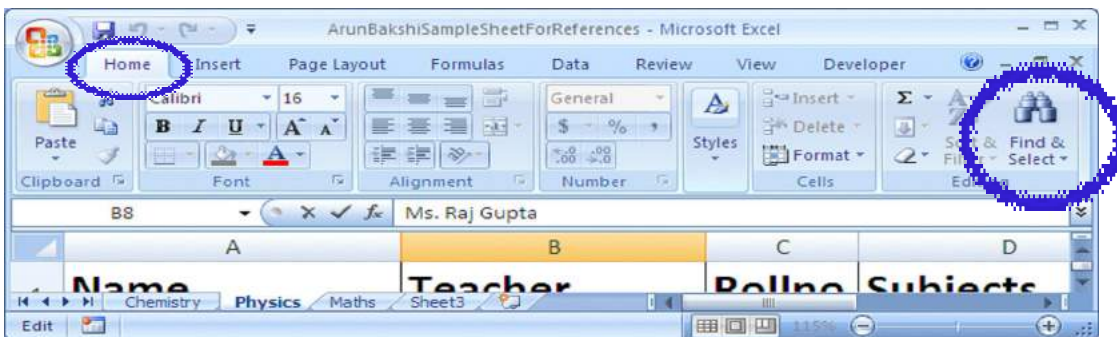


Fig. 4.19

4.23 MODIFYING A WORKSHEET

Insert Cells, Rows, Columns and Delete Cells

Insert blank cells in a worksheet

- Select the cell or the range (range: Two or more cells on a sheet. The cells in a range can be adjacent or nonadjacent) of cells where you want to insert the new blank cells. Select the same number of cells as you want to insert. For example, to insert five blank cells, you need to select five cells.
- On the **Home** tab, in the **Cells** group, click the arrow next to **Insert**, and then click **Insert Cells**.
- You can also right-click the selected cells and then click **Insert** on the shortcut menu.
- In the **Insert** dialog box, click the direction in which you want to shift the surrounding cells.

Insert rows in a worksheet

For inserting rows in a worksheet, the steps are given below:

- To insert a single row, select the row or a cell in the row above which you want to insert the new row. For example, to insert a new row above row 5, click a cell in row 5.
- To insert multiple rows, select the rows above which you want to insert rows. Select the same number of rows as you want to insert. For example, to insert three new rows, you need to select three rows.
- To insert nonadjacent rows, hold down CTRL while you select nonadjacent rows.

Alternate method of inserting rows is; on the **Home** tab, in the **Cells** group, click the arrow next to **Insert**, and then click **Insert Sheet Rows**.

Insert columns in a worksheet

For inserting columns in a worksheet the steps are given below:

- To insert a single column, select the column or a cell in the column immediately to the right of where you want to insert the new column. For example, to insert a new column to the left of column B, click a cell in column B.
-

- To insert multiple columns, select the columns immediately to the right of where you want to insert columns. Select the same number of columns as you want to insert. For example, to insert three new columns, you need to select three columns.
- To insert nonadjacent columns, hold down CTRL while you select nonadjacent columns.

Alternate method of inserting columns is; on the **Home** tab, in the **Cells** group, click the arrow next to **Insert**, and then click **Insert Sheet Columns**.

Delete cells, rows, or columns

1. Select the cells, rows, or columns that you want to delete.
2. On the **Home** tab, in the **Cells** group, do one of the following:
 - To delete selected cells, click the arrow next to Delete, and then click Delete Cells.
 - To delete selected rows, click the arrow next to Delete, and then click Delete Sheet Rows.
 - To delete selected columns, click the arrow next to Delete, and then click Delete Sheet Columns.
3. If you are deleting a cell or a range of cells, using the **Delete** dialog box, click **Shift cells left**, **Shift cells up**, **Entire row**, or **Entire column**.

Move or copy entire cells

When you move or copy a cell, Excel moves or copies the entire cell, including formulas and their resulting values, cell formats, and comments.

1. Select the cells that you want to move or copy.
 2. On the **Home** tab, in the **Clipboard** group, do one of the following:
 - To move cells, click **Cut**. **Keyboard shortcut** or press CTRL+X.
 - To copy cells, click **Copy**. or press CTRL+C.
 3. Select the upper-left cell of the paste area.
-

4. On the **Home** tab, in the **Clipboard** group, click **Paste**. Or press CTRL+V.

Move or copy entire cells by using the mouse

By default, drag-and-drop editing is turned on so that you can use the mouse to move and copy cells.

1. Select the cells or range of cells that you want to move or copy.
2. Do one of the following:
 - To move a cell or range of cells, point to the border of the selection. When the pointer becomes a move pointer, drag the cell or range of cells to another location.

Copy cell values, cell formats, or formulas only

When you paste copied data, you can do any of the following:

- Convert any formulas in the cell to the calculated values without overwriting the existing formatting.
 - Paste only the cell formatting, such as font color or fill color (and not the contents of the cells).
 - Paste only the formulas (and not the calculated values).
1. Select the cell or range of cells that contains the values, cell formats, or formulas that you want to copy.
 2. On the **Home** tab, in the **Clipboard** group, click **Copy**.
 3. Select the upper-left cell of the paste area or the cell where you want to paste the value, cell format, or formula.
 4. On the **Home** tab, in the **Clipboard** group, click the arrow below **Paste**, and then do one of the following:
 - To paste values only, click **Paste Values**.
 - To paste cell formats only, click **Paste Special**, and then click **Formats** under **Paste**.
 - To paste formulas only, click **Formulas**.

Drag and Drop method of moving cells

If you are moving the cell contents only a short distance, the drag-and-drop method may be easier. Simply drag the highlighted border of the selected cell to the destination cell with the mouse.

4.24 PAGE BREAKS

To set page breaks within the worksheet, select the row you want to appear just below the page break by clicking the row's label. Then choose **Page Layout→Setup Group→Breaks→Input Page Break**. Excel will start a new page from the row selected.

4.25 PAGE SETUP

Page setup is necessary to set the page layout, margins etc. before printing. For this first Select **File→Page Setup** from the menu bar. Page setup dialog box appear. In this dialog box there are various options for formatting the page, setting margins, and adding headers and footers.

4.26 PRINT PREVIEW

Print preview helps to view the worksheet before the final printout is taken. It helps to edit the worksheet if required as per the need.

The steps to see the print view of document are;

Select Print from Office Button→Select print→Click Print Preview.

Click the buttons like **Next** and **Previous** with respect to Print Preview Tab. Select the **Zoom** button to view the pages closer. Make page layout modifications needed by clicking the **Page Setup** button. Click **Close** to return to the worksheet or **Print** to continue printing.

4.27 PRINT

To print the worksheet, select Print from Office Button. Print dialog box appears with the following:

1. **Print Range** - Select either all pages or a range of pages to print.
 2. **Print What** - Select selection of cells highlighted on the worksheet, the active worksheet, or all the worksheets in the entire workbook.
 3. **Copies** - Choose the number of copies that should be printed. Check the **Collate** box if the pages should remain in order.
 4. Click **OK** to print.
-

INTEXT QUESTIONS 4.1

1. State True or False
 - (a) Sheet tab identifies the worksheets in the workbook.
 - (b) By default, three worksheets are included in each workbook.
 - (c) To enter data in a worksheet, you need not have to select a cell or a range.
2. To view shortcut menu, we need to:
 - (a) Click the mouse
 - (b) Right click the mouse
 - (c) First click and then right click the mouse
3. To copy the selected text you can use this key combination:
 - (a) ctrl + x
 - (b) ctrl + v
 - (c) ctrl + c
 - (d) All of the above
4. Ctrl+F is the keyboard shortcut for
 - (a) Help
 - (b) Find
 - (c) Replace
 - (d) Save
5. What is the command on the menu bar to save:
 - (a) a new file
 - (b) existing file

4.28 USING FORMULAS

Formulas are used for simple addition, subtraction, multiplication and division as well as for complex calculations.

To manipulate data and extract useful information from Excel worksheets, formulas play very important role. In Excel, formulas are used to calculate results from the worksheet data. When there is some change in the data, such formulas automatically calculate

the updated results with no extra efforts on the part of the user. There is a new feature introduced by Excel 2007, which enables you to create formulas which use columns names from a table, when you are working with table. This feature helps the user to make formulas much easier to read.

• Entering Formulas

A formula can have any or all of the following elements

- Must begin with the 'equal to' = sign.
- Mathematical operators, such as + (for addition), – (for subtraction), * (for multiplication) and / (for division) and logical operators such as < (less than) or > (greater than) etc.
- References of cell (including named ranges and cells)
- Text or Values
- Functions related to the worksheets, for example SUM or AVERAGE

The current cell in which you have entered a formula will display the result after the formula is completely entered. Also, when you select or click on a cell which is having some formula, the formula will appear in the formula bar.

In Excel 2007, the formulas are available in the Formulas Tab. If you click on the Formulas tab, you can see the corresponding ribbon display with available formulas, as shown in Figure 4.20

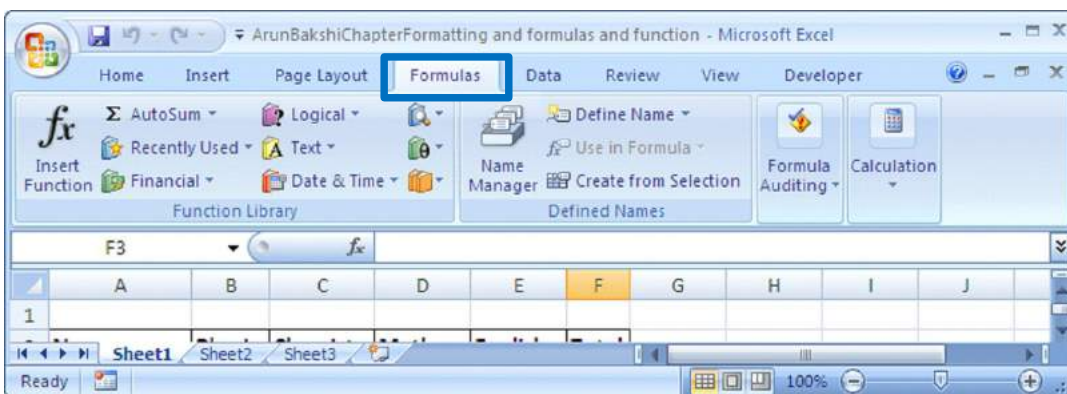


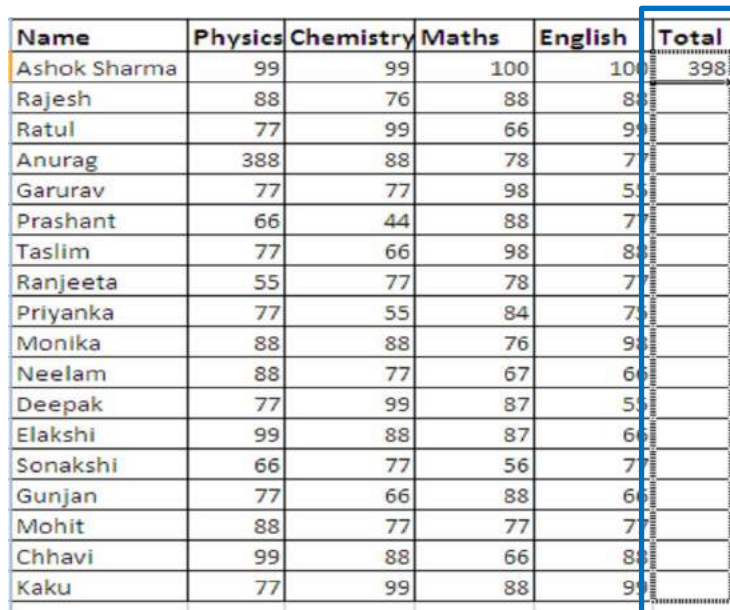
Fig. 4.20

For entering a formula, the steps are as follows:

1. Select the cell in which you want to enter the formula.

2. Then type an equal to sign =.
3. Type a value, cell reference or function.
4. If the formula is complete press Enter key or click the Enter box in the formula bar. If the formula is incomplete proceed further.
5. Type the operator such as (+) or (-).
6. Return to step 3.

Following are a few examples of formulas:



Name	Physics	Chemistry	Maths	English	Total
Ashok Sharma	99	99	100	100	398
Rajesh	88	76	88	88	
Ratul	77	99	66	99	
Anurag	388	88	78	77	
Garurav	77	77	98	55	
Prashant	66	44	88	77	
Taslim	77	66	98	88	
Ranjeeta	55	77	78	77	
Priyanka	77	55	84	77	
Monika	88	88	76	99	
Neelam	88	77	67	66	
Deepak	77	99	87	55	
Elakshi	99	88	87	66	
Sonakshi	66	77	56	77	
Gunjan	77	66	88	66	
Mohit	88	77	77	77	
Chhavi	99	88	66	88	
Kaku	77	99	88	99	

Fig. 4.21

In the above example, in the cell F3, just type = B3+C3+D3+E3 (see Figure). It will return sum of the marks in physics, chemistry, maths and English

- **Copying a formula**

Just drag the handle and bring down to cover the remaining cells in the column total. This will automatically copy the formula and calculate the corresponding sum of the respective rows of the other students.

The alternate way of copying a formula is:

1. Activate source cell.
-

2. Click copy button.
3. Select destination cell.
4. Click paste button.

Entering Cell Reference

Cell reference allows you to use values from different parts of a worksheet and execute. You can use any cell or group of cells in a formula. The steps are as follows:

1. Select the cell for the formula.
2. Type = sign.
3. Point to the cell you want to enter in the formula and click on it. The address of the cell appears at the formula bar.

Using operators in Formulas

Various types of operators can be included in Excel formulas. The following table shows the name and description of these operators.

Operators	Sign	Type of operation
Arithmetic	+	Addition
	-	Subtraction
	*	Multiplication
	/	Division
	%	Percentage
	^	Exponentiation
Comparison	<	Less than
	>	Greater than
	<=	Less than or equal to
	>=	Greater than or equal to
	<>	Not equal to
Text	& (ampersand)	Joins text within quotationmarks. (concatenation)

Order of Operations

Excel 2007 follows a set of rules when applying operators in a formula. Working from the first calculation to the last, Excel 2007

evaluates operators in the order shown in the following table

Operator	Definition
–	Negations (e.g., –1)
%	(percents)
^	(exponentiations)
* and /	(multiplication) and (division)
+ and –	Addition and subtraction

If you want to change the order in which calculations are performed then enclose in parenthesis, those terms which you want to calculate first. For example the result of the following two formulas will be different because of parenthesis.

	Formula	Result
i)	= 6 + 15/3	11
ii)	=(6 + 15)/3	7

Examples of formulas

Some examples of formulas are given as follows:

If A1 = 2, B1 = 3, C1 = 4, D1 = 5 then

- (i) = B1 * C1 will give result as 3 * 4 = 12
- (ii) = A1 * B1 – C1 + D1 will give result as 2 * 3 – 4 + 5 = 7
- (iii) = ((A1 * B1) + C1)/D1 will give result as ((2 * 3) + 4)/5
= (6 + 4)/5 = 10/5 = 2

4.29 FUNCTIONS

Functions are the built in formulas used to perform calculations in Excel on specific values called the arguments. Structure of a formula utilizing a function begins with the equal to sign = followed by the name of the function, and then the arguments. Functions which are used frequently such as SUM function are made available in the form of buttons in the Home tab.

Entering Functions in a Worksheet

There are two ways by which you can enter functions in a worksheet:

- a) **Direct method:** In this method, function name and required arguments are entered directly in the formula bar.
- b) **By inserting a function:** Insert function button (*fx*) is available under the Formulas tab

The steps are as follows:

1. First click on the cell where you want to enter the formula.
2. Click on **Formulas tab**.
3. Then click on **Insert function**. **Insert Function** dialog box opens.
4. In the dialog box, type the function description and click on **Go**.
5. Select a function category. List of functions appears. Select the appropriate function.
6. Description of the function and the syntax appears in the lower part of the dialog box. Go through it and be satisfied that it is the exact function, you want to use.
7. Click on OK or double click the function. Function Arguments dialog box appears.
8. Selected function displays in the formula bar as well as in the cell simultaneously.
9. Enter the arguments in the text boxes shown in the function argument dialog box.
10. Click OK.

Auto Sum Function

The sum of cell values can also be done with the help of AutoSum function.

Following steps explains how to do that.

- Click on the cell F3
 - Select the Formulas tab
 - Click AutoSum from the function library group.
 - Select Sum
 - Press Enter
-

Alternatively, you can write = SUM(B3:E3) in the Cell F3 to get the sum of the Physics, Chemistry, Maths and English marks.

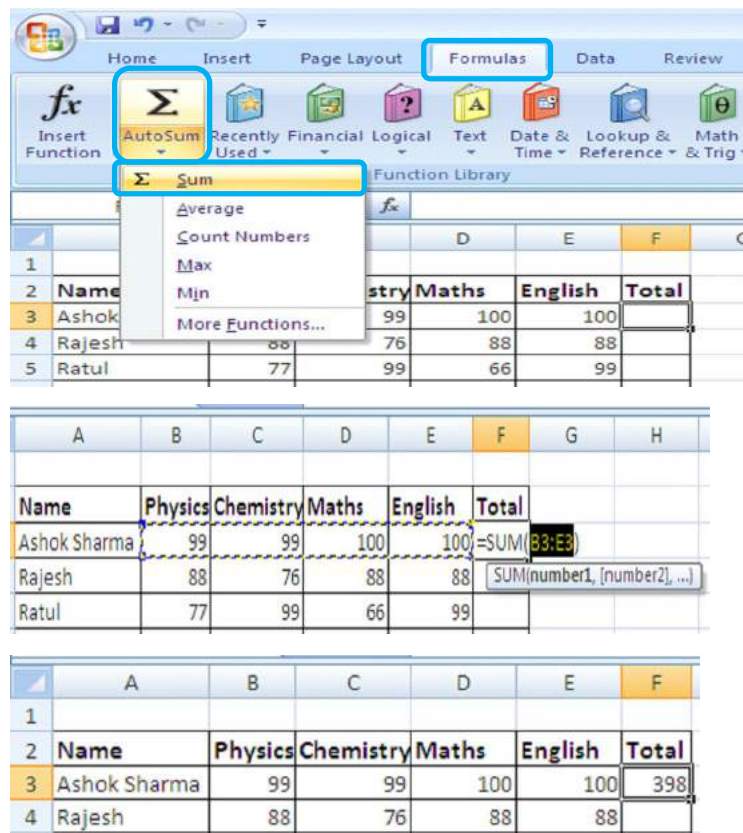


Fig. 4.22

Apart from sum there are other functions also, like average, Count Numbers, Max, Min and many other Functions.

4.30 CHARTS

Charts allow you to present data entered into the worksheet in a visual format using a variety of chart types. Before you can make a chart, you must first enter data into a worksheet. Formatted charts come in various types ranging from columns, line, pie, area, scatter and others. Charts can be placed in the same worksheet as the data or it can be inserted into its own sheet. To create a chart, first-select the cells containing the data, you want to put into chart and then choose chart type.

There are various types of charts to help you to display data in different ways as per the need of the viewers. You can create a

new chart or can change the existing chart, from the wide range of chart.

Column Charts

This type of chart is used to compare values across categories. They give very effective results to analyze the data of the same category on a defined scale.

Line Charts

Line charts can be used to display continuous data over time with respect to a common scale. Thus Line Charts are best suitable for viewing data trends at equal intervals of time.

Pie charts

In a situation where one has to show the relative proportions or contributions to a whole, a pie chart is very useful. In case of pie chart only one data series is used. Small number of data points adds more to the effectiveness of pie charts. Generally there should be maximum five or six data points or slices in a pie chart.

Bar Charts

Bar charts are used to show comparisons between individual items. To make a bar chart the data should be arranged in the form of rows and columns on a worksheet.

XY (Scatter) charts

XY charts are also known by other names like scatter grams or scatter plots. The point of difference between XY charts and other types of charts is that in XY charts both axes display values i.e. they have no category axis. Such type of charts is generally used to show the relationship among two variables.

4.31 FORMATTING WORKSHEETS

Formatting helps to make our work more presentable. It also helps the user to understand the worksheet more easily with respect to its purpose.

There are three locations where the Excel 2007 formatting tools are available.

1. In the home tab
2. In the mini toolbar that appears when you right click a range or a cell
3. In the format cells dialog box.

Home Tab and the Formatting Tools

Home tab provides the quick access to the most commonly used options with respect to the formatting requirements. You can select a cell or a range and then use the tools like Font, Alignment or Number groups as per the need (Fig. 4.23).

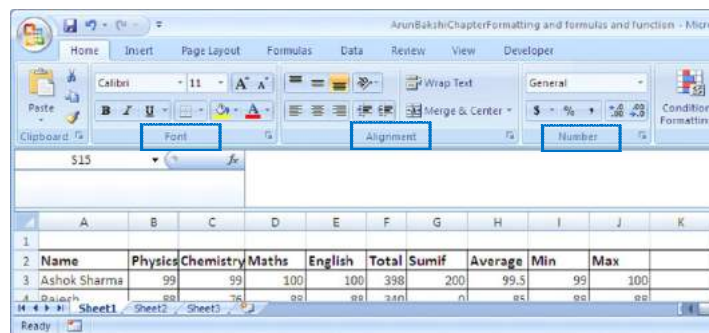


Fig. 4.23

Using the Mini Toolbar

Shortcut menu appears when you right click a cell or a range selection. A mini toolbar also appears above the shortcut menu which contains controls for common formatting.

Using the Format Cells dialog box

Although most of the formatting related requirements gets fulfilled by the controls available on the Home tab of the Ribbon, some special types of formatting are fulfilled by using Format cells dialog box.

4.32 DATE AND TIME FORMAT

If you enter the date "January 1, 2001" into a cell on the worksheet, Excel will automatically recognize the text as a date and change the format to "1-Jan-01". To change the date format, select the **Number tab** from the **Format Cells** window. Select "Date" from the Category box and choose the format for the date

from the Type box. If the field is a time, select "Time" from the Category box and select the type in the right box. Date and time combinations are also listed. Press OK when finished.

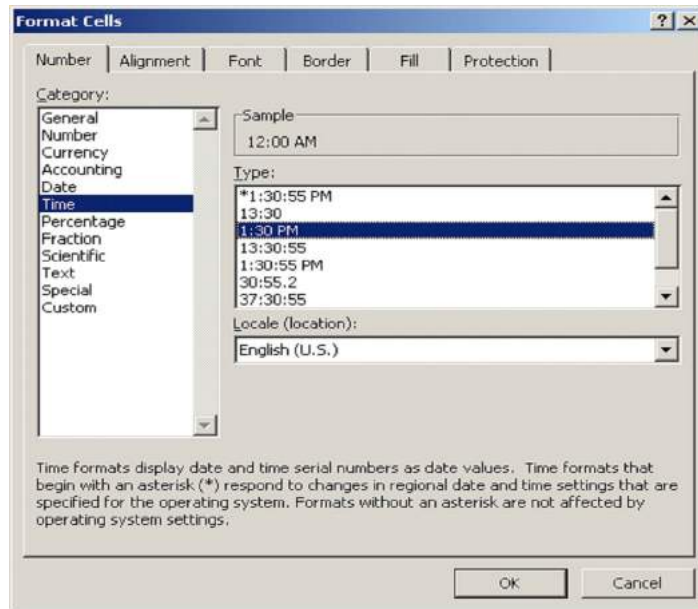


Fig. 4.24

4.33 FORMATTING COLUMNS AND ROWS

Sometimes the contents of the columns do not fit in its width. So, to adjust them within the width of the column. As you can observe, in the column C, the column header is not fully visible. There are two methods: a) Resizing rows & column and b) Using Autofit

(a) Resizing Rows and Columns

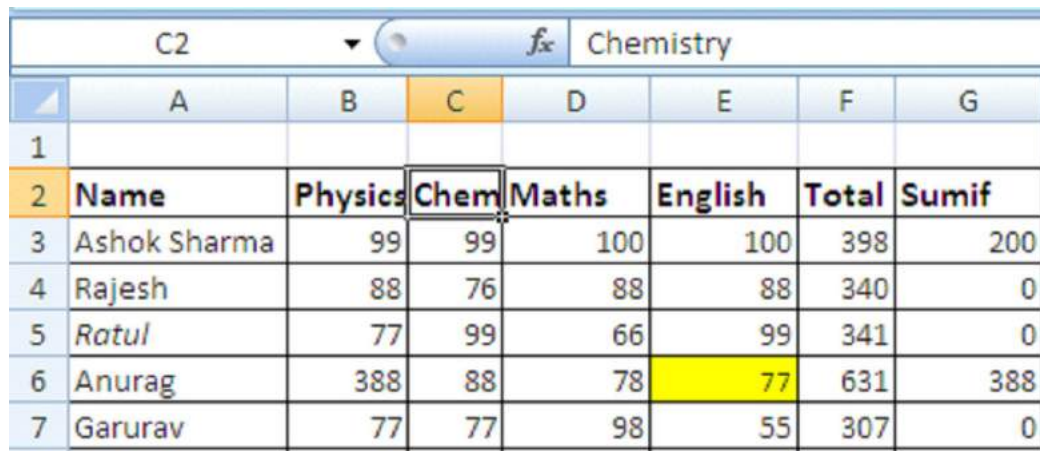
Set a column to a specific width

1. Select the column or columns that you want to change.
2. On the **Home** tab, in the **Cells** group, click **Format**.
3. Under **Cell Size**, click **Column Width**.
4. In the **Column width** box, type the value that you want.

Set a row to a specific height

1. Select the row or rows that you want to change.

2. On the **Home** tab, in the **Cells** group, click **Format**.
3. Under **Cell Size**, click **Row Height**.
4. In the **Row height** box, type the value that you want.



	A	B	C	D	E	F	G
1							
2	Name	Physics	Chem	Maths	English	Total	Sumif
3	Ashok Sharma	99	99	100	100	398	200
4	Rajesh	88	76	88	88	340	0
5	Ratul	77	99	66	99	341	0
6	Anurag	388	88	78	77	631	388
7	Garurav	77	77	98	55	307	0

Fig. 4.25

(b) Steps to AutoFit Columns

- Click on Column Header/or any other cell in the column to change its width.
- Click Home tab.
- Select format from the cells group on the ribbon.

INTEXT QUESTIONS 4.2

6. Write True or False for the following statements.
 - (a) Format cells dialog box offers you more option than the alignment buttons on the formatting toolbar.
 - (b) If you want only to clear the contents of the cell, select the cell and press Delete key.
 - (c) If the field is a time, select "time" from the category box of Format cells dialog box.
 - (d) To unhide the column Right click on the selected column and then select unhide from the pop up menu.
 - (e) Autofit option is used to fit the worksheet in the workbook.
 - (f) The use of Scrollbars is set margins in a document.
-

7. Fill in the blanks
- (a) If the toolbar is not already visible on the screen select _____.
 - (b) In Excel all styles are _____.
 - (c) Hiding columns or rows will help you to _____ worksheet from unwanted changes.
 - (d) A mini tool bar also appears above the short cut menu when you _____ click a cell or a range.
 - (e) To change the data format select the _____ from the format cells window.
 - (f) The _____ command in the menu bar is used to access the Bullets and Numbering dialog box.
-

4.34 WHAT YOU HAVE LEARNT

In this lesson you learnt about main features of Wordprocessing and spreadsheets like create, format and Print a document and worksheet. Apart from that you learnt about how to add table, bullets and numbering and use of mail merge in word. In Spreadsheet you learnt about the use of formulas and functions in a worksheet. On the basis of data entered in a worksheet you can create a bar chart, area chart, line chart or pie chart, you can add title, legend, data labels and grid lines to the chart.

4.35 TERMINAL QUESTIONS

1. Write short notes on
 - (a) Scrollbars
 - (b) Font Style
 - (c) Line spacing
 - (d) Merging documents
 2. Write the steps for copying and moving text in wordprocessing.
-

3. What is the difference between Print preview and Print commands?
4. Explain the concept of functions. What are the steps for entering functions in a worksheet?
5. What are the different types of Charts? Explain in brief.

4.36 FEEDBACK TO INTEXT QUESTIONS

1. (a) True (b) True (c) False
 2. (b)
 3. (c)
 4. (b)
 5. (a) File → Save (b) File → Save As
 6. (a) True (b) True (c) True
(d) True (e) True (f) False
 7. (a) view toolbar formatting (b) cell style
(c) prevent (d) Right
(e) number tab
(f) Format Bullets and Numbering
-